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EXAMINER

NATNAEL, PAULO S M

ART UNIT PAPER NUMBER

2614

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/725,905

Applicant(s)

HONG ET AL.

Examiner

Paulos M. Natnael

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4-7 is/are allowed.
- 6) ☒ Claim(s) 8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. As correctly indicated by the applicant, the ***Claim Rejections under 35 USC § 103*** are based on Jung (6,456,341) and not Takezawa et al. (6,130,497). Examiner regrets the confusion.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims **14** and **15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 14 and 15, the claimed "said second portion" (all occurrences) lacks antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims **8-12, 14 and 20** are **again** rejected under 35 U.S.C. 102(e) as being anticipated by Jung, U.S. Pat. 6,456,341.

Considering claim **8**, a cathode ray tube (CRT) assembly of a projection television, comprising;

- a) a CRT for creating an image, is met by CRT 50, fig.5.
- b) a lens for magnifying the image produced by said CRT and for projecting the image onto a screen, is met by the Lens 60, Fig.5;
- c) a coupler disposed between said CRT and said lens, coupling said lens to said CRT, defining a receptacle filled with a cooling liquid, is met by the coupler 70, fig.5, which includes receiving portion 71 holding cooling liquid "C".
- d) an inlet formed on one side of said coupler, and communicating with said receptacle, is met by coolant injection hole **72**, fig.5;
- e) a pack unit coupled to said inlet, and including a pack, is met by items 80, **85**, and 87, figs.5-7;

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f) a pack holder disposed between said pack and said inlet, and having a first end coupled to an open portion of said pack and a second end coupled to said inlet, is met by cap **80**, fig.5;

g) the claimed "through hole formed inside said pack holder and communicating with both said pack and said receptacle, is met by the through hole/passage that communicates with both the receiving portion **71** and pack holder **80** that is clearly disclosed on Fig.5. (The "through hole" of Jung is not indicated with any numeral, but is shown as a channel that allows the passage or flow of the cooling liquid from the receiving portion **71** to the oil cap holder **80** or vice versa.)

Considering Claim **9**, the CRT assembly of claim 8, wherein said pack unit is detachably attached to said inlet, is met by oil cap and holder **80**, and **85** and the disclosure that it is possible to remove "an oil cap holder from said coolant system and removing an oil cap from said coolant". (col. 6, lines 3-4)

Considering Claim **10**, the CRT assembly of claim 8, wherein said pack is made of a flexible material and includes an open portion and a closed portion accommodating a portion of said cooling liquid flowing from said receptacle through said through hole, is met by the disclosure that "the oil cap **80** can be deformed into a concave shape when coolant C expands according to changes in pressure of a coolant receiving portion **71**"

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(col. 3, lines 38-41) which given reasonably broad interpretation, makes it flexible material.

Considering Claim 11, the CRT assembly of claim 10, wherein a volume of said pack varies in accordance with the portion of said cooling liquid flowing from said receptacle, is **inherent** because the volume change in the oil pack would be dependent upon whether the coolant expands or contracts.

Considering Claim 12, the CRT assembly of claim 8, wherein said pack holder includes a first portion and a second portion which are perpendicular to each other, is also inherent because the pack holder would have portion to hold it together to the device.

Considering claim 14, see rejection of claim 12.

Considering claim 20, a cathode ray tube (CRT) assembly, comprising:

- a) a CRT, is met by CRT 50, fig.5;
- b) a lens projecting an image produced by said CRT onto a screen, is met by 60, fig.5;
- c) a coupler disposed between said CRT and said lens for coupling said lens to said CRT, and having a receptacle filled with a cooling liquid, and having an inlet, is met by coupler 70, fig.5, which includes the receiving portion 71 for holding the cooling liquid "C".

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d) a pack having a sealed portion and an open end, is met by items 80, 85, and 87, figs.5-7;

e) a pack holder disposed between said pack and said coupler, and having a first end detachably attached to said inlet of said coupler, and having end coupled to said open second end of said pack, is met by cap 80, fig.5;

f) a through hole formed on said first end and said second end of said pack holder, and *communicating with both said receptacle and an interior of said sealed portion of said pack*, is met by the through hole/passage (not given numeral indicator) that communicates with both the receiving portion 71 and pack 80 and is clearly seen/disclosed on Fig.5. (The "through hole" is not indicated with any numeral, but is shown as a **channel** that allows the **passage** or **flow** of the cooling liquid from the receiving portion 71 to the pack 80 or vice versa.)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims **13, 18, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung et al. U.S. Pat. No. **6,456,341**.

Considering Claim **13**, the CRT assembly of claim 8, said first portion of said pack holder including a structure for rotating aid pack holder when said pack holder is connected to said inlet, is met by diaphragm within the oil cap 80. (Fig.5)

Considering Claim **18**, the CRT assembly of claim 14, further comprising a ring inserted between said supporting portion and said a side of said inlet to seal said inlet.

Regarding claim 18, Jung does not specifically disclose a ring. However, the Examiner takes Official Notice in that it is well known in the art that a ring around a screw, cork, or other such similar device would be inserted to prevent the liquid therein from leaking and seal any such inlet or hole. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Jung and provide a ring around the inlet and seal the inlet or hole, in order to prevent leaks.

Considering Claim **19**, the CRT assembly of claim 14, said through hole comprising a first hole portion formed inside of said first portion o said pack holder and a second hole portion formed inside of said second portion of said pack holder, said first hole portion being perpendicular to said second hole portion.

Regarding claim **19**, see rejection of claim 12;

Response to Arguments

8. Applicant's argument that both the inlet 72 and the through hole 91 cannot be met by inlet 72 of Jung '341 is acceptable. And, as shown in the rejections of claims 8 and 20 above, the examiner has corrected the discrepancy and the inlet 72 is met by 72 of '341, and the through hole 91 is met by Jung's ('341) passage (not indicated by any number) that allows the passage of the cooling liquid from portion 71 to the pack 80.

Allowable Subject Matter

9. Claims **1,2,4-7** are allowable over the prior art.

10. Claim **15** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Claims **16-17** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose A cathode-ray tube (CRT) assembly of a projection television, comprising: a CRT for creating an image; a lens for magnifying said image created by said CRT and for projecting said image onto a screen; a coupler disposed between said CRT and said lens for coupling said lens to said CRT, and defining a cooling liquid receptacle which is filled with a cooling liquid; a cooling liquid

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pouring inlet formed on one side of said coupler, and providing a passage way for pouring the cooling liquid into said cooling liquid receptacle', and an oilpack connected to said cooling liquid pouring inlet, and communicating with said cooling liquid receptacle so that a portion of the cooling liquid is contained in said oil pack when the cooling liquid in said cooling liquid receptacle expands and said portion of the cooling liquid overflows from said cooling liquid receptacle said oilpack further comprising' a sealed space: a pack holder disposed between said sealed space and said cooling liquid pouring inlet and having a through hole communicating with said sealed space and said cooling liquid receptacle; and, oilpack coupling means formed on said pack holder for coupling said pack holder to said cooling liquid pouring inlet, as in claim 1;

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMN
December 24, 2004



PAUL S. NATHANIEL
PATENT EXAMINER